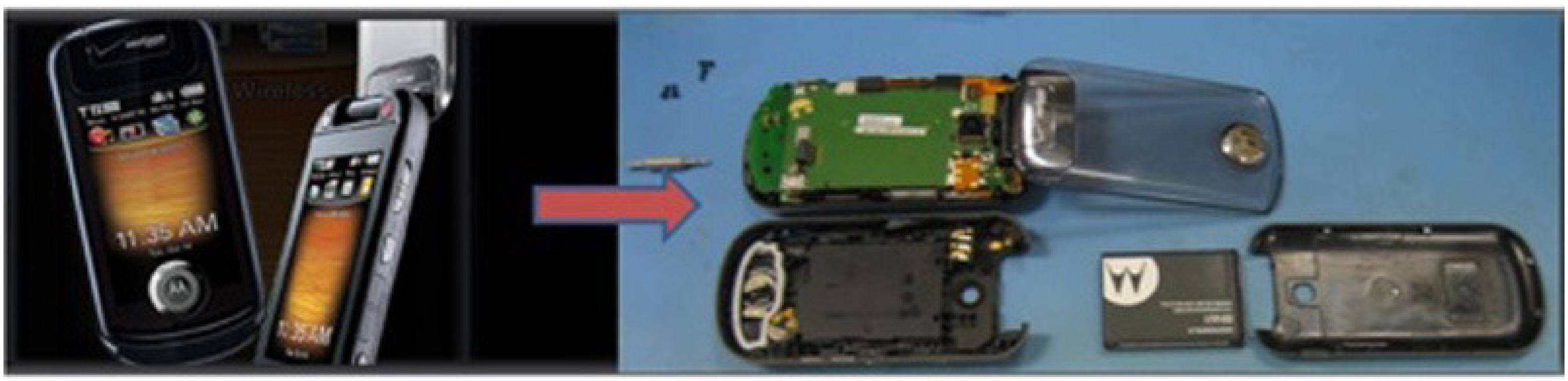
Motorola Krave Teardown

Written By: drwreck



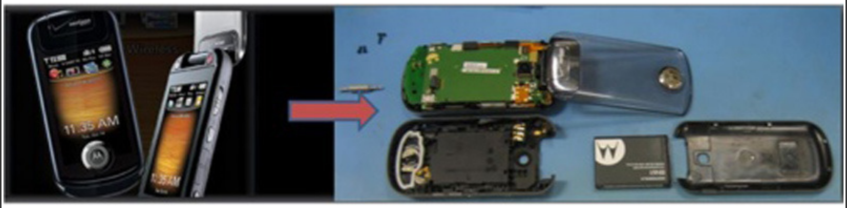
INTRODUCTION

Overview of the Krave hardware with circuit diagrams and labeled chips. Also see www.phoneWreck.com for more in-depth analysis.

TOOLS:

- iFixit Opening Tools (1)
- Spudger (1)
- 64 Bit Driver Kit (1)

Step 1 — Motorola Krave Teardown



- We gave the Motorola Krave a spin and - of course - a good tearing down.
- This phone was actually even more of a pain to open than the Nokia N95. This is due to the multiple layers and multiple connections made. Shielding was an issue, but wire snippers made quick work of that.
- Not only is there one main touchscreen, the cover also contains a capacitive circuit.

Step 2

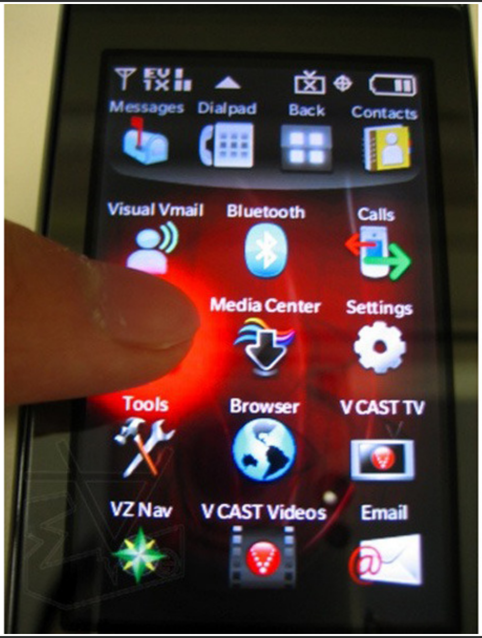






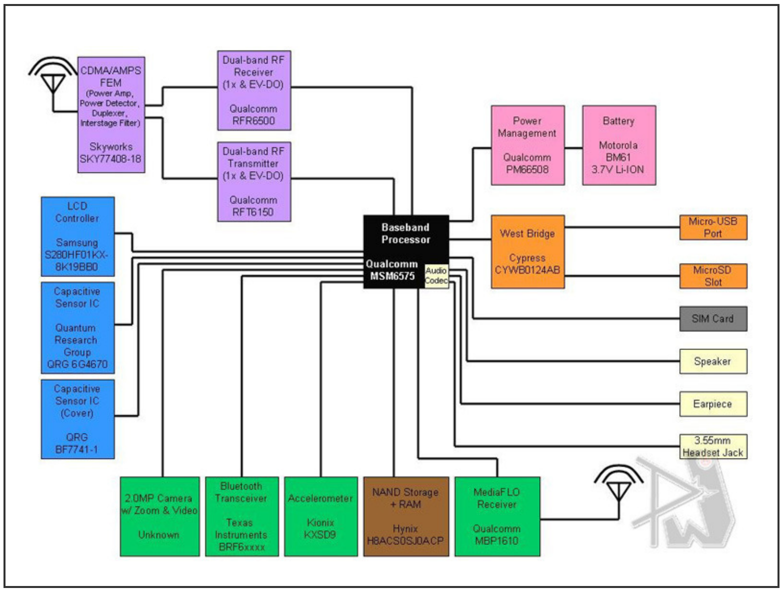
- A unique feature (with questionable practicality) is the device’s ability to use the touchscreen with the clear plastic cover closed. The way this is implemented is through an ingenious, thin mesh that’s able to sense your fingers position.
- The mesh is actually used to transmit power and signals to the earpiece, as there is no other connection to it, which brings us to the second unique feature.
- The Krave’s earpiece is made to appear wireless. It’s a very interesting concept and it definitely has its appeals.

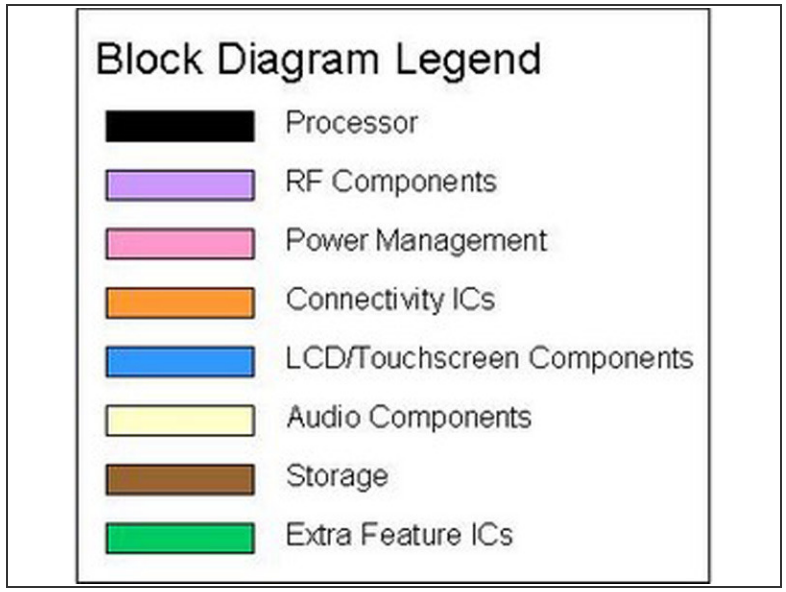
Step 3



- The capacitive touch screen. It generally responds well (as is generally the case with a capacitive screen), but it has its infuriating moments.
- Menus move along with with your finger, and haptic feedback lets you know your choices as you press them. They're quick (most of the time) and it works very well with the browser.
- Dialing is also a breeze with quick thumb touches.

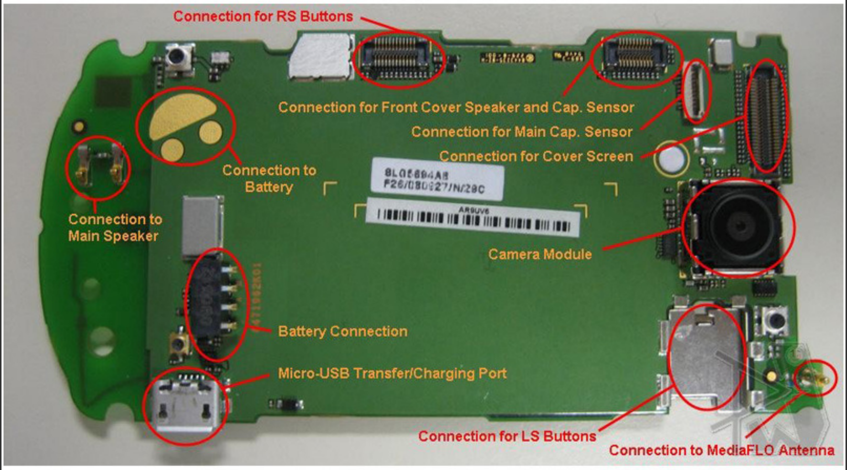
Step 4





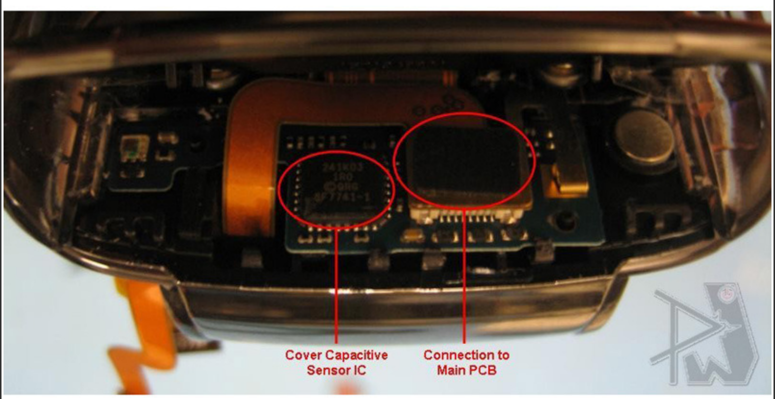
- It’s got an integrated audio codec, the Qualcomm MSM6575 chip, which feeds signals to the earpiece, dedicated speaker, and headset jack.
- It’s got a separate receiver and transmitter (RFR6500 & RFT6150 respectively), which is a little bit odd considering the board space that two ICs use.
- Power is managed through Qualcomm’s PM66508.
- It’s got a MediaFLO receiver, Qualcomm MBP1610, for all that streaming video goodness.
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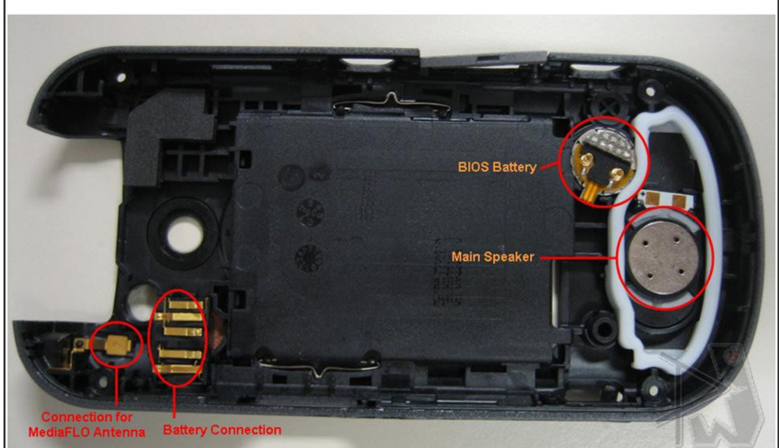
Step 5



- The main IC diagram can be found here.
- The Krave uses a Cypress Semiconductor part for its West Bridge components.
- A quick Google search on its part number: CYWB0124AB brought up interesting articles on how its West Bridge parts independently route data from the USB interface onto a MicroSD card.

Step 6





- The two capacitive sensor ICs, both from Quantum Research Group (QRG 6G4670 for the main screen & QRG BF7741-1 for the cover).
- The nigh-invisible mesh on the cover senses the location of the touch. There is also one on top of the main LCD screen (Samsung).